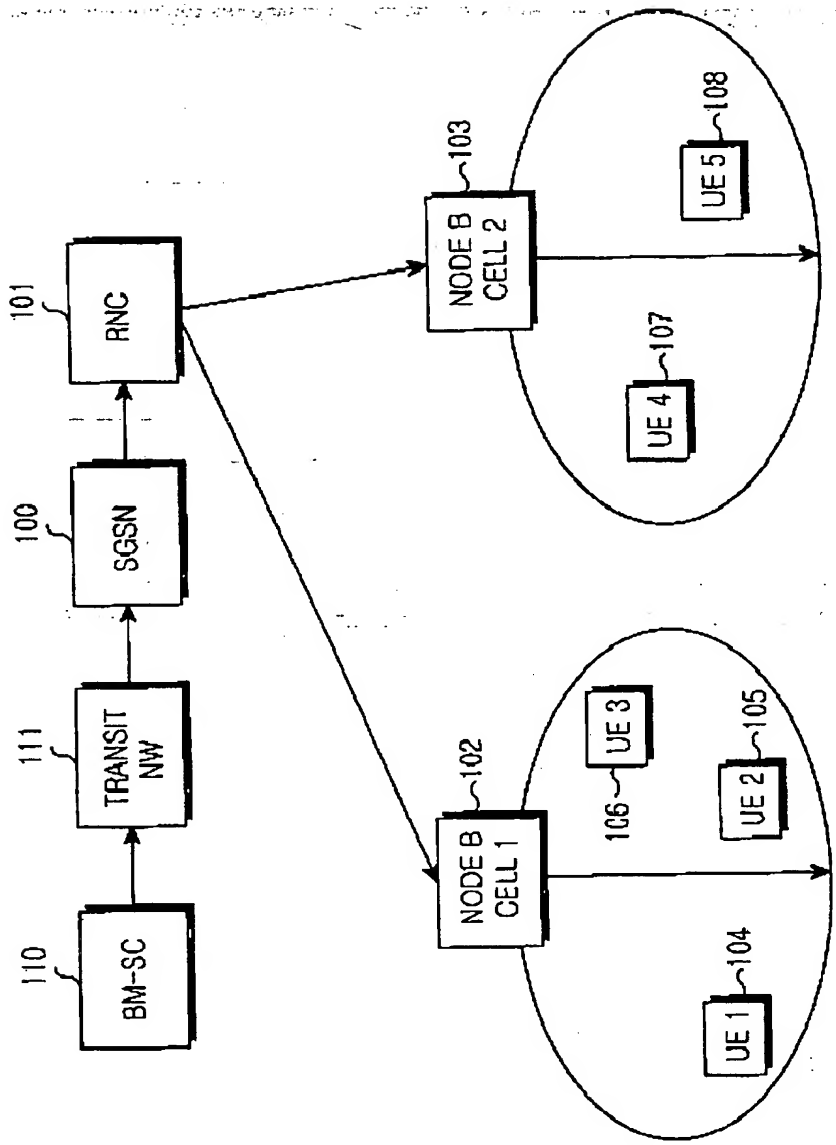

FIG. 1
(PRIOR ART)

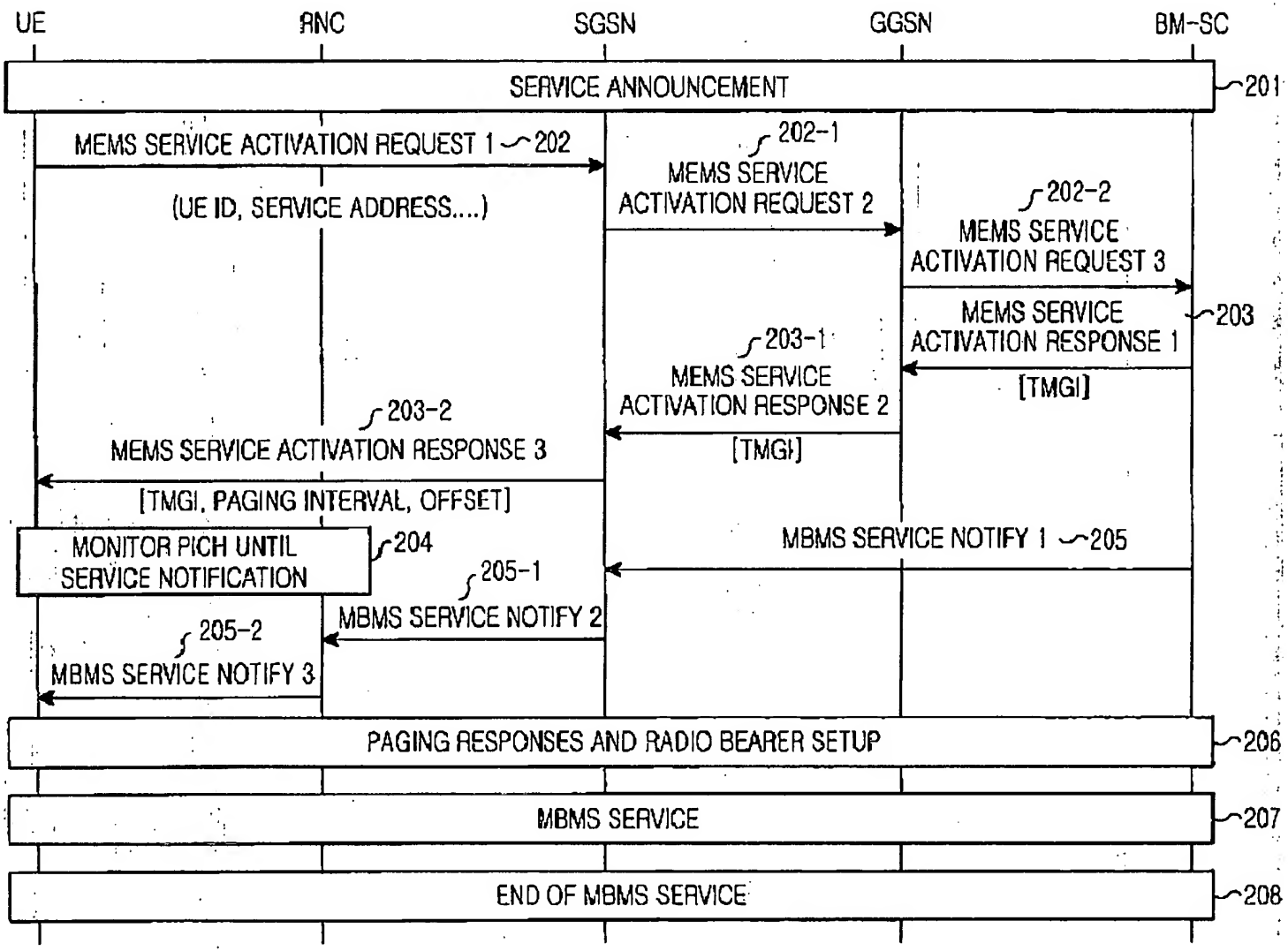
UE
RNC
SGSN
GGSN
BM-SC
SERVICE ANNOUNCEMENT
201
MEMS SERVICE ACTIVATION REQUEST 1
202
(UE ID, SERVICE ADDRESS....)
202-1
MEMS SERVICE ACTIVATION REQUEST 2
202-2
MEMS SERVICE ACTIVATION REQUEST 3
MEMS SERVICE ACTIVATION RESPONSE 1
203
[TMGI]
203-1
MEMS SERVICE ACTIVATION RESPONSE 2
[TMGI]
203-2
MEMS SERVICE ACTIVATION RESPONSE 3
[TMGI, PAGING INTERVAL, OFFSET]
MONITOR PICH UNTIL SERVICE NOTIFICATION
204
MBMS SERVICE NOTIFY 1
205
205-1
MBMS SERVICE NOTIFY 2
205-2
MBMS SERVICE NOTIFY 3
PAGING RESPONSES AND RADIO BEARER SETUP
206
MBMS SERVICE
207
END OF MBMS SERVICE
208

FIG.2

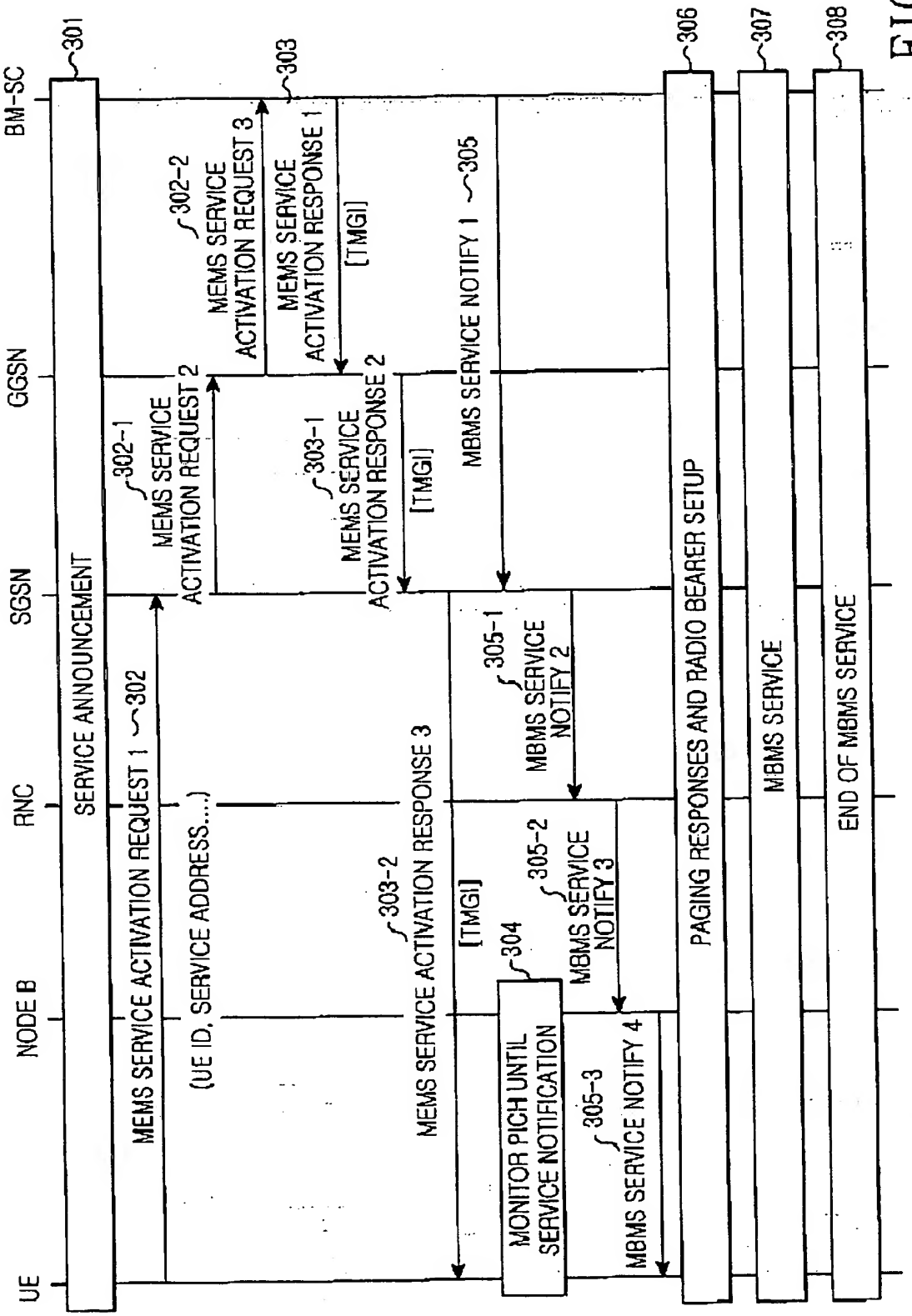
UE
NODE B
RNC
SGSN
GGSN
BM-SC
301
SERVICE ANNOUNCEMENT
302
MEMS SERVICE ACTIVATION REQUEST 1
(UE ID, SERVICE ADDRESS....)
302-1
MEMS SERVICE ACTIVATION REQUEST 2
302-2
MEMS SERVICE ACTIVATION REQUEST 3
303
MEMS SERVICE ACTIVATION RESPONSE 1
[TMGI]
303-1
MEMS SERVICE ACTIVATION RESPONSE 2
[TMGI]
303-2
MEMS SERVICE ACTIVATION RESPONSE 3
[TMGI]
304
MONITOR PICH UNTIL SERVICE NOTIFICATION
305
MBMS SERVICE NOTIFY 1
305-1
MBMS SERVICE NOTIFY 2
305-2
MBMS SERVICE NOTIFY 3
305-3
MBMS SERVICE NOTIFY 4
306
PAGING RESPONSES AND RADIO BEARER SETUP
307
MBMS SERVICE
308
END OF MBMS SERVICE

FIG.3

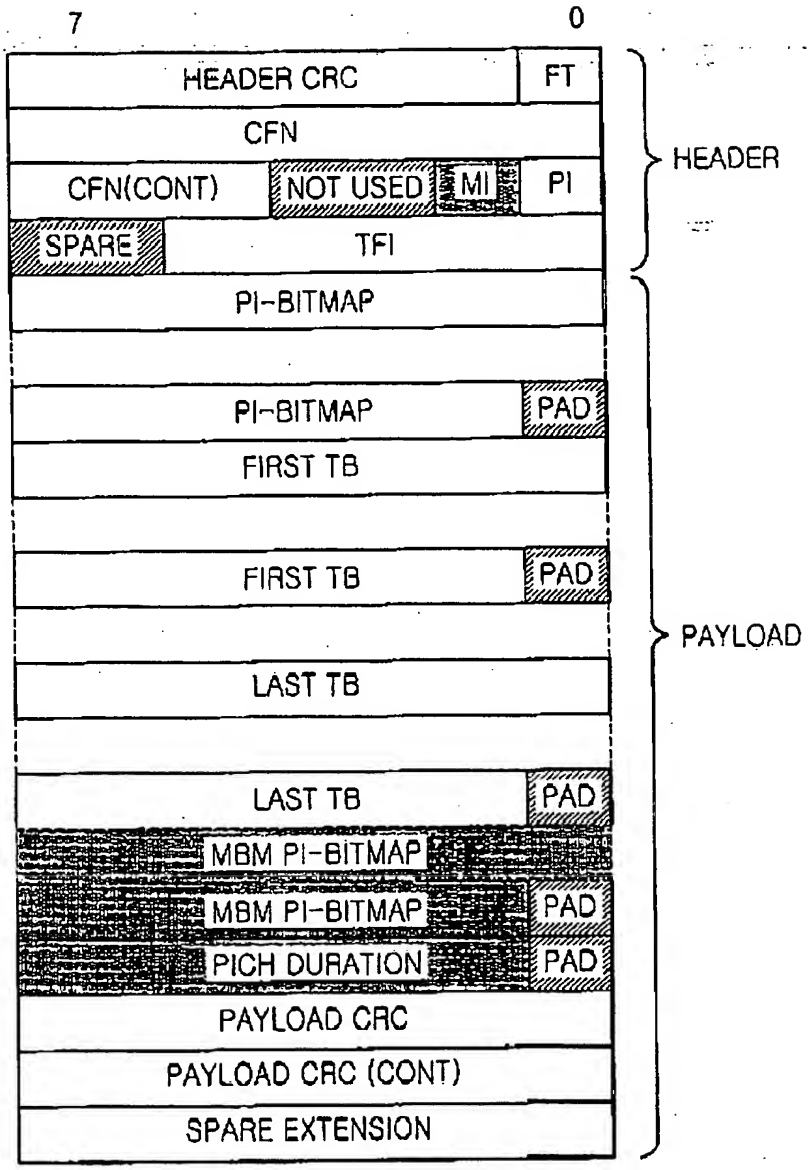
7
0
HEADER CRC
FT
CFN
CFN(CONT)
NOT USED
MI
PI
SPARE
TFI
HEADER
PI-BITMAP
PI-BITMAP
PAD
FIRST TB
FIRST TB
PAD
LAST TB
LAST TB
PAD
MBM PI-BITMAP
MBM PI-BITMAP
PAD
PICH DURATION
PAD
PAYLOAD CRC
PAYLOAD CRC (CONT)
SPARE EXTENSION
PAYLOAD

FIG.4

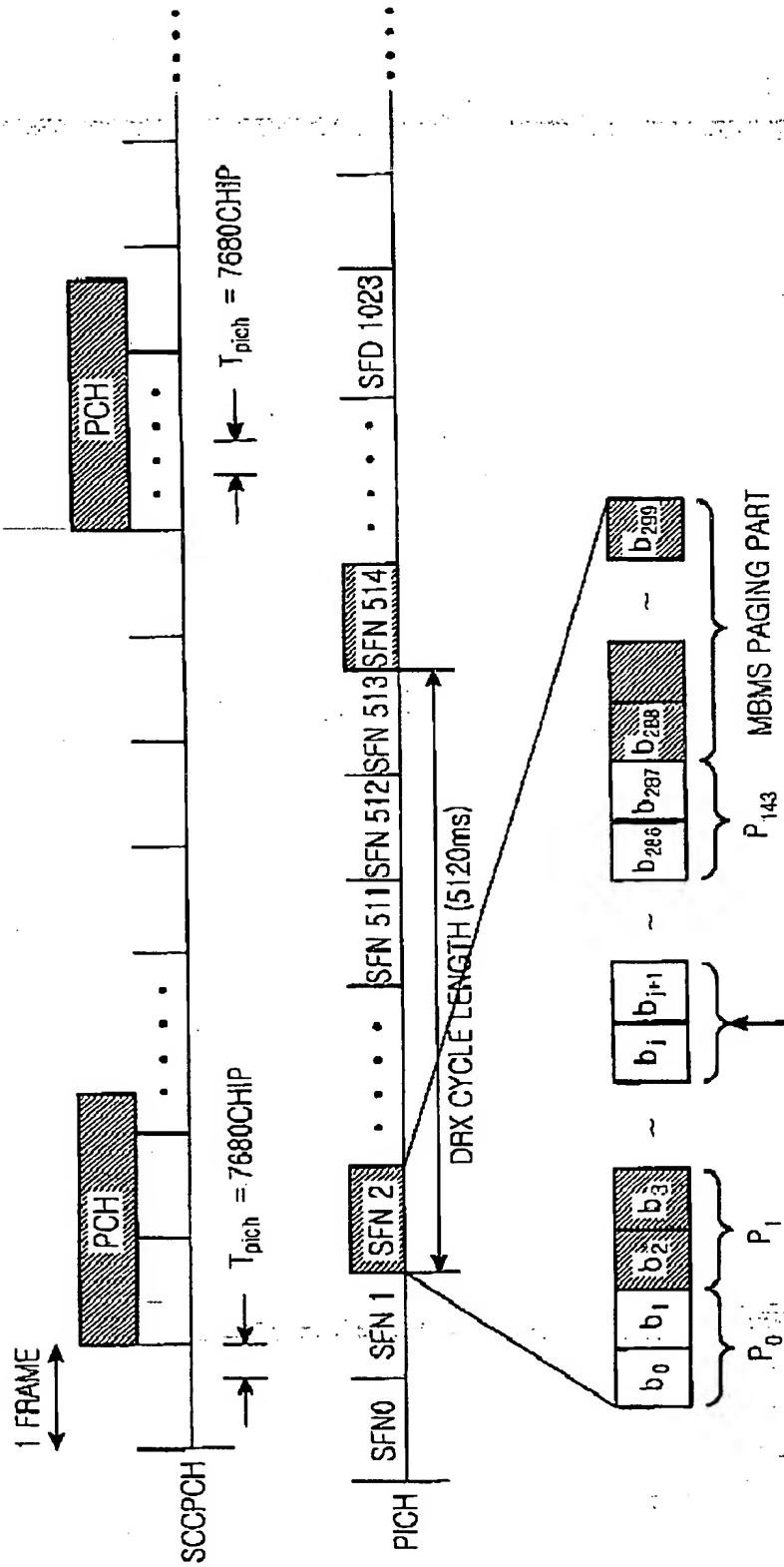
1 FRAME
SCCPCH
PCH
PCH
T_{pich} = 7680CHIP
T_{pich} = 7680CHIP
PICH
SFN0
SFN 1
SFN 2
SFN 511
SFN 512
SFN 513
SFN 514
SFD 1023
DRX CYCLE LENGTH (5120ms)
b_0 b_1 b_2 b_3
b_i b_{i+1}
b_{286} b_{287} b_{288}
b_{299}
P_0
P_1
P_{143}
MBMS PAGING PART
PAGING INDICATOR P_i
(NP=144)
PAGING INDICATOR POSITION
OF A UE

FIG.5

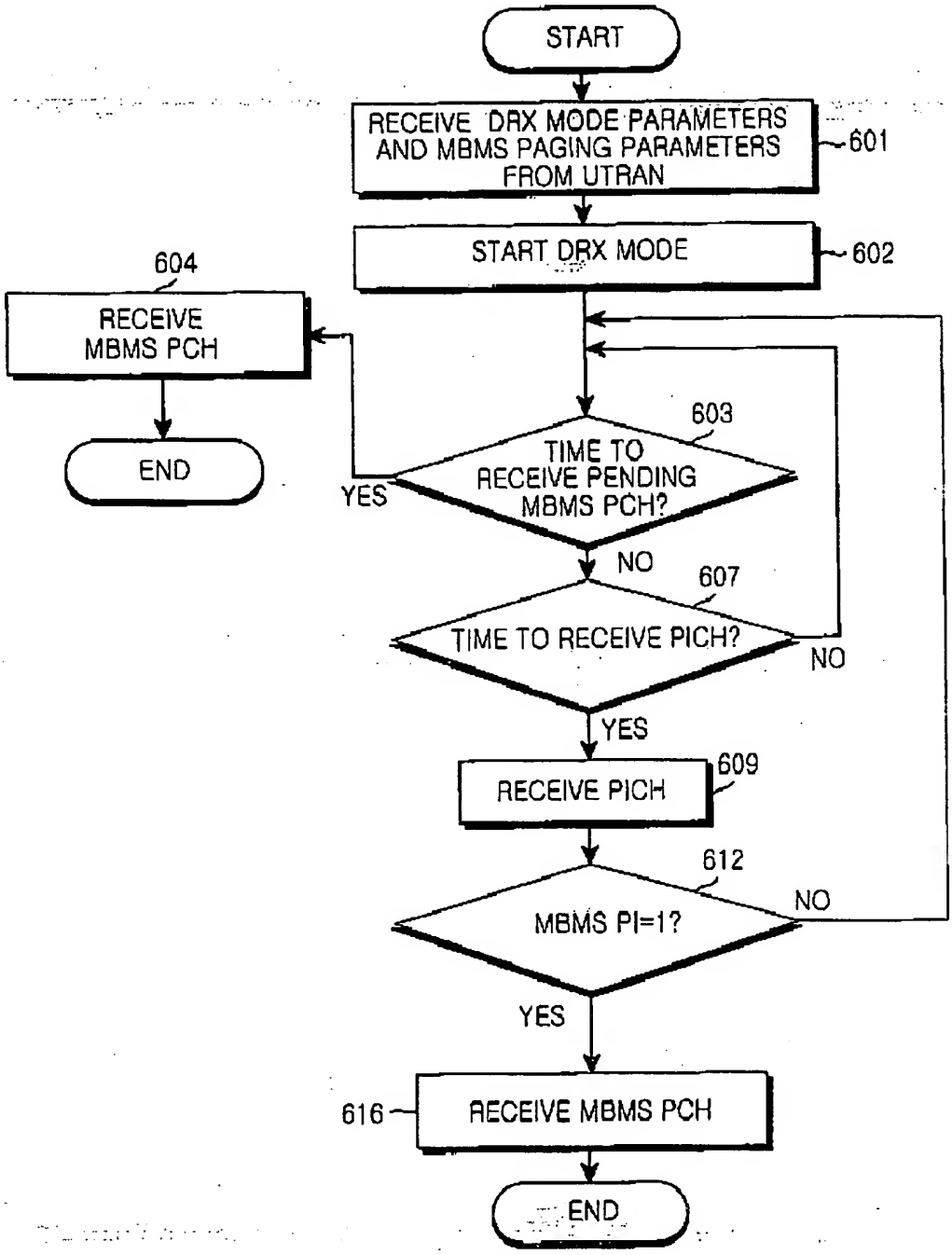
START
RECEIVE DRX MODE PARAMETERS AND MBMS PAGING PARAMETERS FROM UTRAN
601
START DRX MODE
602
604
RECEIVE MBMS PCH
END
603
TIME TO RECEIVE PENDING MBMS PCH?
YES
NO
607
TIME TO RECEIVE PICH?
NO
YES
609
RECEIVE PICH
612
MBMS PI=1?
NO
YES
616
RECEIVE MBMS PCH
END

FIG.6

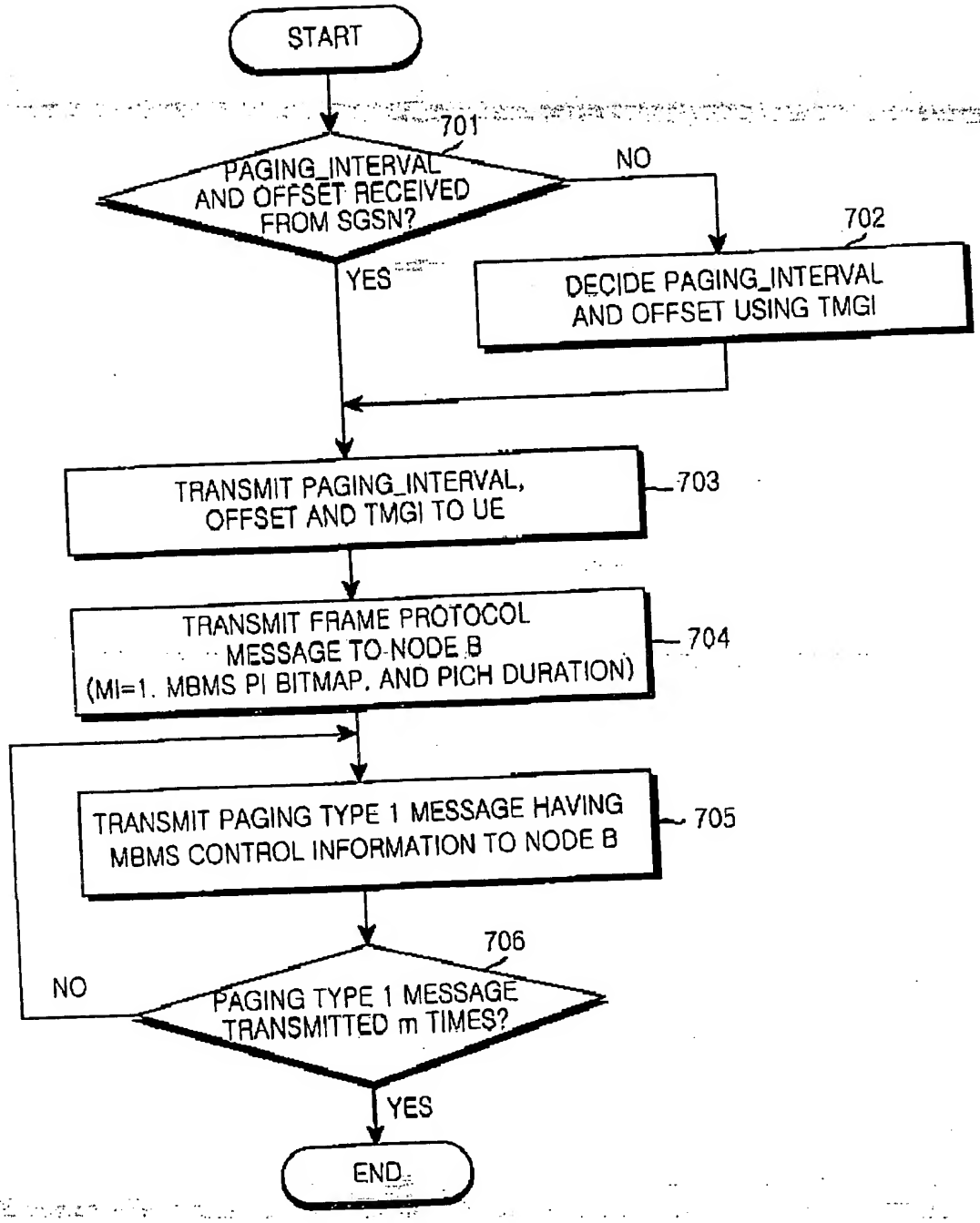
START
701
PAGING_INTERVAL AND OFFSET RECEIVED FROM SGSN?
NO
YES
702
DECIDE PAGING_INTERVAL AND OFFSET USING TMGI
TRANSMIT PAGING_INTERVAL, OFFSET AND TMGI TO UE
703
TRANSMIT FRAME PROTOCOL MESSAGE TO NODE B (MI=1. MBMS PI BITMAP. AND PICH DURATION)
704
TRANSMIT PAGING TYPE 1 MESSAGE HAVING MBMS CONTROL INFORMATION TO NODE B
705
706
NO
PAGING TYPE 1 MESSAGE TRANSMITTED m TIMES?
YES
END

FIG.7